



203 1/2 East Main Street, P.O. Box 102, Mount Horeb, Wisconsin 53572  
608-437-3900 / jdrapeaupioneer@rxn.com

March 10, 2009

Mr. Jeff Ackerman  
Wisconsin Department of Natural Resources  
3911 Fish Hatchery Road  
Madison, WI 53711-5397

**RE: SUPPLEMENTRY INFORMATION SUBMITTAL // Kwik Trip Store # 768,  
537 Ridge Street, Mineral Point, WI (BRRTS # 03-25-113363 & PECFA #  
53565-1440-35)**

Dear Mr. Ackerman

This submittal is in response to your letter dated February 24, 2009. There have been numerous conversations between all parties involved in this project that have occurred the past several months. In order to move this project along, we are providing some of the additional information you requested, however, it is not all inclusive of your request, since numerous items are beyond the PECFA Bid Document for this phase of the project. The items being provided are noted and highlighted on the attached letter for ease of discussion, and backups compiled sequentially thereafter.

You have raised several concerns regarding the past history/remedial investigation activities that were conducted from 1997-2003, and summarized in previous submittals to the WDNR. Of which, numerous documents, such as; Soil tables, Soil Sample Locations Maps, Site Location Map, and Well Receptor Survey were taken from the previous consultants' reports. The typical scope of compiling a WDNR Closure Packet consists of obtaining the previously submitted reports, and using the appropriate tables and figures w/ minor modifications. For example, Pioneer is not going to redo parts of the remedial investigation, like the Well Receptor Survey; what Pioneer did was take the submitted reports as being accurate, and used the LBG figure within our template. Also, if there are items/questions, such as; how the soil samples were handled during the piping upgrade, which is always a valid concern; however, that would require further information from the previous consultant. The answers for this soil sampling concern, might be or might not be in the field notes of the previous consultant, however, this would require additional scope of work to define.

Based on your letter, it appears that the WDNR Closure Submittal Packet and GIS Submittal Packet were not taken before the WDNR Closure Committee. You indicated the case is not ready for closure. If that is the case, then the Closure Review & GIS submittal fees should be returned to Kwik Trip Inc. and the WDNR & Dept of Commerce need to define a new Bid to Scope Document for obtaining the additional information/required work that you list within your letter. It is Pioneer's opinion that the bringing this document to the closure committee might provide the opportunity for additional items to be defined and added to your list of items, so that we potentially could be considered a final scope of work for this BRRTS/PECFA site.

If you have any questions or concerns, please call or email to discuss.

Very truly yours,

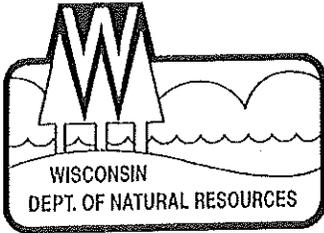
**PIONEER ENVIRONMENTAL INC.**

Joseph A. Drapeau  
Senior Hydrogeologist, P.G.

Attachment: Highlighted WDNR Feb 24, 2009 Letter  
Additional Information – numerous items

- C Mr. Troy Batzel, Kwik Trip Stores  
Mr. Alan Hopfensperger, Dept of Commerce

FILE COPY



State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Jim Doyle, Governor
Matthew J. Frank, Secretary
Lloyd L. Eagan, Regional Director

South Central Region Headquarters
3911 Fish Hatchery Road
Fitchburg, Wisconsin 53711-5397
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File Ref: 03-25-113363

February 24, 2009

Mr. Troy Batzel
Kwik Trip, Inc
1626 Oak Street
P.O. Box 2107
LaCrosse, WI 54602-2107

Subject: Denial of Case Closure and Request for Additional Information -- Kwik Trip, Mineral Point

Dear Mr. Batzel:

The Department received Pioneer's request for case closure and GIS registry package. That information was reviewed along with the case file, to determine if the case meets the case closure requirements. The case is not ready to close. You will need to have Pioneer correct reporting errors, perform additional site evaluation, and possibly do additional free product removal, before the case can close.

Problem with LBG dbase, which is corrupted, when printing as an Adobe PDF, it drops out rows. A direct Hard Copy from excel is provided. fixed, and 2) technical concerns that are clarity, they are presented separately.

Reporting

Attached complete Lab set for scoped work. closure request resulted from my December 10, 2008 email to you. Pioneer was unwilling to do the ne... without assurances of additional PECFA eligibility, and Commerce approved the use of \$2000... costs to address the reporting errors. The closure request and GIS package were submitted, but... Previously discussed, and note added to table there are new reporting errors also need to be corrected

Historical Flow Chart on GW Flow Map, shows all flow directions, for scoped sampling rounds and some of the historical flow directions.

Some of the previously noted problems that haven't been corrected include:

- The water level data table remains incomplete. There is data missing for at least MW-2 and MW-5.
Pioneer didn't send in the missing laboratory data sheets and chain of custody documentation.
There is no flag, discussion, or footnote, regarding the elevated detection limits at MW-8.
There are no water table maps for many of the sampling rounds.
The "top of well" values, listed for MW-1 and MW-3 in Table 3, are still incorrect and need to be fixed.
The groundwater data table reporting limit problem was not fixed. Rather than list the appropriate reporting limits, Pioneer replaced the erroneous detection limit values with "ND". The use of "ND" is not acceptable; the actual reporting limits need to be shown on the table. Additionally, the web report data are still in error, and those must also be corrected.

Fixed

Detection Limits added, COMM is not concerned w/ MDLs

Some errors with the closure submittal that need to be fixed before the next request include:

- It is unclear what data are being used to determine the need for listing the site on the soil GIS registry, and what manner of soil re... pathway on page 2 of t... consider whether or no... Point well taken - Based on the RI Soil Data: The NR 726 approach is only necessary if pb exceedences are above background levels. No site specific background data was collected, however, Mineral Point being within the Historical Pb Mining district, the site specific values are not a concern. No soil GIS registry is necessary based on the existing soil data.



the release. The soil contamination extent map should include a title identifying it as such.

- The site locator map points to the east side of the street and the site is on the west side of the street.
- The municipal wells (#3 and #4) are mislabeled as #1 and #2, and appear to be mislocated.
- The graph showing the concentration of benzene at the monitoring wells is in error. The graph shows a concentration of 0 at MW-7 for rounds when the well was not sampled.

Changes made

- The last column of table 1 is illegible, and what can be deciphered appears erroneous.
- The groundwater isoconcentration map shows <1.8 ug/L at MW-8 when it should show 1.8 ug/L.

#### Technical Concerns

MW-3 shows the most free product of any well installed for this site. It seems plausible, based on its location, that this well is impacted by a source other than the presumed source at the dispenser islands.

- The soil sampling at the site was poor. Possible Future Bid to scope the sampling methods? How long were the excavations left open before the soil was removed from beneath the piping elbows, and why were there no bottom samples collected from those excavations?
- The water levels at MW-1 and MW-7 indicate a significant downward gradient at the site.
- There is no estimate of the amount of free product that was released or of how much remains.
- Groundwater flow variations, indicated by sporadic contamination and relatively low water levels at MW-5, need to be analyzed, and potential contaminant migration to the north should be evaluated.
- The presence and effect of highly mineralized zones within the bedrock have not been considered.

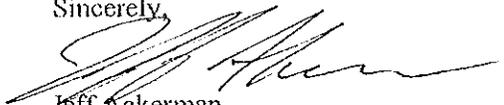
#### Required Work

- Perform additional investigation to demonstrate that there aren't other more likely sources affecting MW-3. Specifically, you will need to perform additional soil sampling in the vicinity of the tank bed (s), and install an additional well down-gradient (southeast) of the pump islands.
- Install a piezometer to evaluate the vertical extent of the groundwater plume.
- Fix the remaining reporting errors and address the other technical concerns raised in this letter.
- Perform additional groundwater monitoring and product removal, as appropriate.

NR 700, Wis. Adm. Code, is a self-implementing rule. The recent problems with the reporting on your case have taken an excessive amount of Department time. You may be asked to pay a technical assistance fee if there are similar issues on your case(s) in the future.

Please contact me by March 15<sup>th</sup>, 2009 to inform me of your plan and schedule for completing the required work.

Sincerely,

  
Jeff Ackerman  
Hydrogeologist  
(608) 275-3323

Copy: Alan Hopfensperger, Dept. of Commerce  
Joe Drapeau, Pioneer Environmental, Inc.

TABLE 1  
 KWIK TRIP, INC.  
 STATION NO. 768  
 MINERAL POINT, WISCONSIN

FLUID-LEVEL MEASUREMENTS  
 (all measurements are in feet)

Location	Date	Depth to Water	Depth to Product	Top of Casing Elevation	Top of Screen Elevation	Bottom of Screen Elevation	Water Elevation	Product Thickness	Corrected Elevation
MW-1	8/18/1999	41.66	-	1145.22	1095.22	1080.22	1103.56	-	-
MW-1	8/20/1999	41.78	-	1145.22	1095.22	1080.22	1103.44	-	-
MW-1	9/14/1999	42.42	-	1145.22	1095.22	1080.22	1102.80	-	-
MW-1	12/9/1999	44.46	44.41	1145.22	1095.22	1080.22	1100.76	0.05	1100.80
MW-1	12/29/1999	44.48	-	1145.22	1095.22	1080.22	1100.74	-	-
MW-1	1/24/2000	44.89	-	1145.22	1095.22	1080.22	1100.33	-	-
MW-1	2/23/2000	45.59	-	1145.22	1095.22	1080.22	1099.63	-	-
MW-1	3/10/2000	45.90	-	1145.22	1095.22	1080.22	1099.32	-	-
MW-1	6/22/2000	45.91	44.87	1145.22	1095.22	1080.22	1099.31	1.04	1100.10
MW-1	9/20/2000	40.31	40.29	1145.22	1095.22	1080.22	1104.91	0.02	1104.93
MW-1	12/19/2000	43.44	*	1145.22	1095.22	1080.22	1101.78	-	-
MW-1	1/11/2001	45.15	44.55	1145.22	1095.22	1080.22	1100.07	0.60	1100.53
MW-1	2/22/2001	44.47	44.46	1145.22	1095.22	1080.22	1100.75	0.01	1100.76
MW-1	8/29/2001	41.26	-	1145.22	1095.22	1080.22	1103.96	-	-
MW-1	9/21/2001	41.40	-	1145.22	1095.22	1080.22	1103.82	-	-
MW-1	11/29/2001	43.51	43.50	1145.22	1095.22	1080.22	1101.71	0.01	1101.72
MW-1	12/18/2001	42.02	-	1145.22	1095.22	1080.22	1103.20	-	-
MW-1	1/30/2002	43.07	42.68	1145.22	1095.22	1080.22	1102.15	0.39	1102.45
MW-1	2/21/2002	43.49	-	1145.22	1095.22	1080.22	1101.73	-	-
MW-1	3/21/2002	43.64	43.63	1145.22	1095.22	1080.22	1101.58	0.01	1101.59
MW-1	4/30/2002	43.81	-	1145.22	1095.22	1080.22	1101.41	-	-
MW-1	6/4/2002	42.85	-	1145.22	1095.22	1080.22	1102.37	-	-
MW-1	7/22/2002	41.96	41.90	1145.22	1095.22	1080.22	1103.26	0.06	1103.31
MW-1	9/4/2002	42.09	-	1145.22	1095.22	1080.22	1103.13	-	-
MW-1	3/18/2003	44.23	44.20	1145.22	1095.22	1080.22	1100.99	0.03	1101.01
MW-1	4/21/2003	44.55	-	1145.22	1095.22	1080.22	1100.67	-	-
MW-1	6/3/2003	44.38	-	1145.22	1095.22	1080.22	1100.84	-	-
MW-1	7/23/2003	44.03	-	1145.22	1095.22	1080.22	1101.19	-	-
MW-1	10/7/2003	43.40	-	1145.22	1095.22	1080.22	1101.82	-	-
MW-1	10/31/2003	45.06	-	1145.22	1095.22	1080.22	1100.16	-	-
MW-1	1/7/2004	42.32	-	1145.22	1095.22	1080.22	1102.90	-	-
MW-1	7/20/2004	40.46	-	1145.22	1095.22	1080.22	1104.76	-	-
MW-1	8/3/2006	43.62	-	1145.22	1095.22	1080.22	1101.60	-	-
MW-1	9/28/2006	42.72	-	1145.22	1095.22	1080.22	1102.50	-	-
MW-1	12/20/2006	43.85	-	1145.22	1095.22	1080.22	1101.37	-	-
MW-1	3/26/2007	45.03	-	1145.22	1095.22	1080.22	1100.19	-	-
MW-1	7/2/2007	41.65	41.64	1145.22	1095.22	1080.22	1103.57	-	-
MW-1	10/1/2007	37.83	37.82	1145.22	1095.22	1080.22	1107.39	-	-
MW-1	4/23/2008	36.78	-	1145.22	1095.22	1080.22	1108.44	-	-
MW-1	7/24/2008	37.30	-	1145.22	1095.22	1080.22	1107.92	-	-
MW-2	8/18/1999	38.11	-	1136.10	1101.10	1086.10	1097.99	-	-
MW-2	8/20/1999	38.14	-	1136.10	1101.10	1086.10	1097.96	-	-
MW-2	9/14/1999	39.10	-	1136.10	1101.10	1086.10	1097.00	-	-
MW-2	12/9/1999	43.15	-	1136.10	1101.10	1086.10	1092.95	-	-
MW-2	3/10/2000	44.50	-	1136.10	1101.10	1086.10	1091.60	-	-
MW-2	6/22/2000	39.94	-	1136.10	1101.10	1086.10	1096.16	-	-
MW-2	9/20/2000	39.54	-	1136.10	1101.10	1086.10	1096.56	-	-
MW-2	12/19/2000	41.48	-	1136.10	1101.10	1086.10	1094.62	-	-
MW-2	10/16/2001	38.49	-	1136.10	1101.10	1086.10	1097.61	-	-
MW-2	12/18/2001	39.53	-	1136.10	1101.10	1086.10	1096.57	-	-
MW-2	3/21/2002	41.32	-	1136.10	1101.10	1086.10	1094.78	-	-
MW-2	6/4/2002	39.54	-	1136.10	1101.10	1086.10	1096.56	-	-
MW-2	9/4/2002	39.33	-	1136.10	1101.10	1086.10	1096.77	-	-
MW-2	3/18/2003	41.68	-	1136.10	1101.10	1086.10	1094.42	-	-

**TABLE 1**  
**KWIK TRIP, INC.**  
**STATION NO. 768**  
**MINERAL POINT, WISCONSIN**

**FLUID-LEVEL MEASUREMENTS**  
(all measurements are in feet)

Location	Date	Depth to Water	Depth to Product	Top of Casing Elevation	Top of Screen Elevation	Bottom of Screen Elevation	Water Elevation	Product Thickness	Corrected Elevation
MW-2	6/3/2003	41.75	-	1136.10	1101.10	1086.10	1094.35	-	-
MW-2	7/23/2003	41.05	-	1136.10	1101.10	1086.10	1095.05	-	-
MW-2	10/7/2003	40.88	-	1136.10	1101.10	1086.10	1095.22	-	-
MW-2	1/7/2004	39.32	-	1136.10	1101.10	1086.10	1096.78	-	-
MW-2	7/20/2004	36.10	-	1136.10	1101.10	1086.10	1100.00	-	-
MW-2	8/3/2006	38.27	-	1136.10	1101.10	1086.10	1097.83	-	-
MW-2	9/28/2006	38.26	-	1136.10	1101.10	1086.10	1097.84	-	-
MW-2	12/20/2006	39.37	-	1136.10	1101.10	1086.10	1096.73	-	-
MW-2	3/26/2007	40.19	-	1136.10	1101.10	1086.10	1095.91	-	-
MW-2	7/2/2007	37.28	-	1136.10	1101.10	1086.10	1098.82	-	-
MW-2	10/1/2007	34.75	-	1136.10	1101.10	1086.10	1101.35	-	-
MW-2	4/23/2008	33.38	-	1136.10	1101.10	1086.10	1102.72	-	-
MW-2	7/24/2008	34.79	-	1136.10	1101.10	1086.10	1101.31	-	-
MW-3	8/18/1999	43.20	-	1139.15	1104.15	1089.15	1095.95	-	-
MW-3	8/20/1999	43.35	-	1139.15	1104.15	1089.15	1095.80	-	-
MW-3	9/14/1999	44.01	-	1139.15	1104.15	1089.15	1095.14	-	-
MW-3	12/9/1999	46.33	-	1139.15	1104.15	1089.15	1092.82	-	-
MW-3	3/10/2000	47.95	-	1139.15	1104.15	1089.15	1091.20	-	-
MW-3	6/22/2000	46.63	44.87	1139.15	1104.15	1089.15	1092.52	1.76	1093.86
MW-3	9/20/2000	44.54	44.23	1139.15	1104.15	1089.15	1094.61	0.31	1094.85
MW-3	12/19/2000	46.56	46.25	1139.15	1104.15	1089.15	1092.59	0.31	1092.83
MW-3	1/11/2001	46.96	46.83	1139.15	1104.15	1089.15	1092.19	0.13	1092.29
MW-3	2/22/2001	47.65	47.48	1139.15	1104.15	1089.15	1091.50	0.17	1091.63
MW-3	8/29/2001	44.17	43.99	1139.15	1104.15	1089.15	1094.98	0.18	1095.12
MW-3	10/16/2001	44.10	44.05	1139.15	1104.15	1089.15	1095.05	0.05	1095.09
MW-3	11/29/2001	44.61	44.44	1139.15	1104.15	1089.15	1094.54	0.17	1094.67
MW-3	12/18/2001	44.85	44.70	1139.15	1104.15	1089.15	1094.30	0.15	1094.41
MW-3	1/30/2002	45.65	45.48	1139.15	1104.15	1089.15	1093.50	0.17	1093.63
MW-3	2/21/2002	46.15	46.13	1139.15	1104.15	1089.15	1093.00	0.02	1093.02
MW-3	3/21/2002	46.73	46.60	1139.15	1104.15	1089.15	1092.42	0.13	1092.52
MW-3	4/30/2002	46.31	-	1139.15	1104.15	1089.15	1092.84	-	-
MW-3	6/4/2002	45.28	-	1139.15	1104.15	1089.15	1093.87	-	-
MW-3	7/12/2002	43.96	-	1139.15	1104.15	1089.15	1095.19	-	-
MW-3	9/4/2002	44.93	-	1139.15	1104.15	1089.15	1094.22	-	-
MW-3	3/18/2003	47.88	47.66	1139.15	1104.15	1089.15	1091.27	0.22	1091.44
MW-3	4/21/2003	48.22	48.00	1139.15	1104.15	1089.15	1090.93	0.22	1091.10
MW-3	6/3/2003	49.53	47.82	1139.15	1104.15	1089.15	1089.62	1.71	1090.92
MW-3	7/23/2003	48.82	47.54	1139.15	1104.15	1089.15	1090.33	1.28	1091.30
MW-3	10/7/2003	48.53	47.53	1139.15	1104.15	1089.15	1090.62	1.00	1091.38
MW-3	10/31/2003	45.44	-	1139.15	1104.15	1089.15	1093.71	-	-
MW-3	1/7/2004	46.75	45.92	1139.15	1104.15	1089.15	1092.40	0.83	1093.03
MW-3	7/20/2004	43.10	42.92	1139.15	1104.15	1089.15	1096.05	0.18	1096.19
MW-3	8/3/2006	47.10	45.28	1139.15	1104.15	1089.15	1092.05	1.82	1093.43
MW-3	9/28/2006	45.26	45.24	1139.15	1104.15	1089.15	1093.89	0.02	1093.91
MW-3	12/20/2006	46.33	46.33	1139.15	1104.15	1089.15	1092.82	0.00	1092.82
MW-3	3/26/2007	47.32	47.31	1139.15	1104.15	1089.15	1091.83	0.01	1091.84
MW-3	7/2/2007	44.58	44.05	1139.15	1104.15	1089.15	1094.57	0.53	1094.97
MW-3	10/1/2007	41.76	41.35	1139.15	1104.15	1089.15	1097.39	0.41	1097.70
MW-3	4/23/2008	40.45	40.20	1139.15	1104.15	1089.15	1098.70	0.25	1098.89
MW-3	7/24/2008	41.15	40.91	1139.15	1104.15	1089.15	1098.00	0.24	1098.18
MW-4	8/18/1999	dry	-	1138.00	1103.00	1088.00	-	-	-

TABLE I  
 KWIK TRIP, INC.  
 STATION NO. 768  
 MINERAL POINT, WISCONSIN

FLUID-LEVEL MEASUREMENTS  
 (all measurements are in feet)

Location	Date	Depth to Water	Depth to Product	Top of Casing Elevation	Top of Screen Elevation	Bottom of Screen Elevation	Water Elevation	Product Thickness	Corrected Elevation
MW-4R	8/20/1999	dry	-	1138.24	1073.24	1068.24	-	-	-
MW-4R	9/14/1999	dry	-	1138.24	1073.24	1068.24	-	-	-
MW-4R	12/9/1999	dry	-	1138.24	1073.24	1068.24	-	-	-
MW-4R	3/10/2000	dry	-	1138.24	1073.24	1068.24	-	-	-
MW-4R	6/22/2000	67.45	-	1138.24	1073.24	1068.24	1070.79	-	-
MW-4R	9/20/2000	dry	-	1138.24	1073.24	1068.24	-	-	-
MW-4R	12/19/2000	dry	-	1138.24	1073.24	1068.24	-	-	-
MW-4R	10/16/2001	69.13	-	1138.24	1073.24	1068.24	1069.11	-	-
MW-4R	12/18/2001	dry	-	1138.24	1073.24	1068.24	-	-	-
MW-4R	3/21/2002	dry	-	1138.24	1073.24	1068.24	-	-	-
MW-4R	6/4/2002	dry	-	1138.24	1073.24	1068.24	-	-	-
MW-4R	9/4/2002	dry	-	1138.24	1073.24	1068.24	-	-	-
MW-4R	3/18/2003	dry	-	1138.24	1073.24	1068.24	-	-	-
MW-4R	6/3/2003	dry	-	1138.24	1073.24	1068.24	-	-	-
MW-4R	7/23/2003	dry	-	1138.24	1073.24	1068.24	-	-	-
MW-4R	10/7/2003	dry	-	1138.24	1073.24	1068.24	-	-	-
MW-4R	1/7/2004	dry	-	1138.24	1073.24	1068.24	-	-	-
MW-4R	7/20/2004	68.44	-	1138.24	1073.24	1068.24	1069.80	-	-
MW-4R	8/3/2006	dry	-	1138.24	1073.24	1068.24	-	-	-
MW-4R	9/28/2006	dry	-	1138.24	1073.24	1068.24	-	-	-
MW-4R	12/20/2006	dry	-	1138.24	1073.24	1068.24	-	-	-
MW-4R	3/26/2007	dry	-	1138.24	1073.24	1068.24	-	-	-
MW-4R	7/2/2007	dry	-	1138.24	1073.24	1068.24	-	-	-
MW-4R	10/1/2008	68.04	-	1138.24	1073.24	1068.24	1070.20	-	-
MW-4R	4/23/2008	66.57	-	1138.24	1073.24	1068.24	1071.67	-	-
MW-4R	7/24/2008	68.11	-	1138.24	1073.24	1068.24	1070.13	-	-
MW-5	8/20/1999	42.37	-	1148.91	1111.91	1096.91	1106.54	-	-
MW-5	9/14/1999	44.27	-	1148.91	1111.91	1096.91	1104.64	-	-
MW-5	12/9/1999	47.99	-	1148.91	1111.91	1096.91	1100.92	-	-
MW-5	12/9/1999	47.99	-	1148.91	1111.91	1096.91	1100.92	-	-
MW-5	3/10/2000	50.55	-	1148.91	1111.91	1096.91	1098.36	-	-
MW-5	6/22/2000	45.24	-	1148.91	1111.91	1096.91	1103.67	-	-
MW-5	9/20/2000	43.62	-	1148.91	1111.91	1096.91	1105.29	-	-
MW-5	12/19/2000	47.59	-	1148.91	1111.91	1096.91	1101.32	-	-
MW-5	10/16/2001	44.35	-	1148.91	1111.91	1096.91	1104.56	-	-
MW-5	12/18/2001	45.93	-	1148.91	1111.91	1096.91	1102.98	-	-
MW-5	3/21/2002	48.54	-	1148.91	1111.91	1096.91	1100.37	-	-
MW-5	6/4/2002	46.63	-	1148.91	1111.91	1096.91	1102.28	-	-
MW-5	9/4/2002	46.08	-	1148.91	1111.91	1096.91	1102.83	-	-
MW-5	3/18/2003	49.91	-	1148.91	1111.91	1096.91	1099.00	-	-
MW-5	6/3/2003	49.71	-	1148.91	1111.91	1096.91	1099.20	-	-
MW-5	7/23/2003	49.25	-	1148.91	1111.91	1096.91	1099.66	-	-
MW-5	10/7/2003	49.01	-	1148.91	1111.91	1096.91	1099.90	-	-
MW-5	1/7/2004	47.57	-	1148.91	1111.91	1096.91	1101.34	-	-
MW-5	7/20/2004	41.84	-	1148.91	1111.91	1096.91	1107.07	-	-
MW-5	8/3/2006	46.64	-	1148.91	1111.91	1096.91	1102.27	-	-
MW-5	9/28/2006	46.41	-	1148.91	1111.91	1096.91	1102.50	-	-
MW-5	12/20/2006	47.97	-	1148.91	1111.91	1096.91	1100.94	-	-
MW-5	3/26/2007	49.14	-	1148.91	1111.91	1096.91	1099.77	-	-
MW-5	7/2/2007	44.59	-	1148.91	1111.91	1096.91	1104.32	-	-
MW-5	10/1/2007	38.64	-	1148.91	1111.91	1096.91	1110.27	-	-
MW-5	4/23/2008	34.79	-	1148.91	1111.91	1096.91	1114.12	-	-
MW-5	7/24/2008	38.44	-	1148.91	1111.91	1096.91	1110.47	-	-

**TABLE 1**  
**KWIK TRIP, INC.**  
**STATION NO. 768**  
**MINERAL POINT, WISCONSIN**

**FLUID-LEVEL MEASUREMENTS**  
(all measurements are in feet)

Location	Date	Depth to Water	Depth to Product	Top of Casing Elevation	Top of Screen Elevation	Bottom of Screen Elevation	Water Elevation	Product Thickness	Corrected Elevation
MW-6	8/20/1999	54.57	-	1134.57	1087.57	1072.57	1080.00	-	-
MW-6	9/14/1999	56.50	-	1134.57	1087.57	1072.57	1078.07	-	-
MW-6	12/9/1999	57.12	-	1134.57	1087.57	1072.57	1077.45	-	-
MW-6	3/10/2000	57.40	-	1134.57	1087.57	1072.57	1077.17	-	-
MW-6	6/22/2000	55.74	-	1134.57	1087.57	1072.57	1078.83	-	-
MW-6	9/20/2000	56.75	-	1134.57	1087.57	1072.57	1077.82	-	-
MW-6	12/19/2000	57.09	-	1134.57	1087.57	1072.57	1077.48	-	-
MW-6	10/16/2001	56.48	-	1134.57	1087.57	1072.57	1078.09	-	-
MW-6	12/18/2001	56.91	-	1134.57	1087.57	1072.57	1077.66	-	-
MW-6	3/21/2002	57.11	-	1134.57	1087.57	1072.57	1077.46	-	-
MW-6	6/4/2002	56.61	-	1134.57	1087.57	1072.57	1077.96	-	-
MW-6	9/4/2002	56.90	-	1134.57	1087.57	1072.57	1077.67	-	-
MW-6	3/18/2003	57.27	-	1134.57	1087.57	1072.57	1077.30	-	-
MW-6	6/3/2003	56.94	-	1134.57	1087.57	1072.57	1077.63	-	-
MW-6	7/23/2003	56.90	-	1134.57	1087.57	1072.57	1077.67	-	-
MW-6	10/7/2003	56.87	-	1134.57	1087.57	1072.57	1077.70	-	-
MW-6	1/7/2004	56.71	-	1134.57	1087.57	1072.57	1077.86	-	-
MW-6	7/20/2004	55.97	-	1134.57	1087.57	1072.57	1078.60	-	-
MW-6	8/3/2006	53.87	-	1134.57	1087.57	1072.57	1080.70	-	-
MW-6	9/28/2006	54.61	-	1134.57	1087.57	1072.57	1079.96	-	-
MW-6	12/20/2006	54.94	-	1134.57	1087.57	1072.57	1079.63	-	-
MW-6	3/26/2007	54.56	-	1134.57	1087.57	1072.57	1080.01	-	-
MW-6	7/2/2007	54.09	-	1134.57	1087.57	1072.57	1080.48	-	-
MW-6	10/1/2007	53.31	-	1134.57	1087.57	1072.57	1081.26	-	-
MW-6	4/23/2008	49.76	-	1134.57	1087.57	1072.57	1084.81	-	-
MW-6	7/24/2008	52.72	-	1134.57	1087.57	1072.57	1081.85	-	-
MW-7	6/3/2003	42.70	-	1144.97	1109.97	1099.97	1102.27	-	-
MW-7	7/23/2003	43.21	-	1144.97	1109.97	1099.97	1101.76	-	-
MW-7	10/7/2003	43.21	-	1144.97	1109.97	1099.97	1101.76	-	-
MW-7	1/7/2004	41.41	-	1144.97	1109.97	1099.97	1103.56	-	-
MW-7	7/20/2004	39.35	-	1144.97	1109.97	1099.97	1105.62	-	-
MW-7	8/3/2006	41.92	-	1144.97	1109.97	1099.97	1103.05	-	-
MW-7	9/28/2006	41.52	-	1144.97	1109.97	1099.97	1103.45	-	-
MW-7	12/20/2006	41.95	-	1144.97	1109.97	1099.97	1103.02	-	-
MW-7	3/26/2007	42.74	-	1144.97	1109.97	1099.97	1102.23	-	-
MW-7	7/2/2007	40.76	-	1144.97	1109.97	1099.97	1104.21	-	-
MW-7	10/1/2007	36.95	-	1144.97	1109.97	1099.97	1108.02	-	-
MW-7	4/23/2008	36.32	-	1144.97	1109.97	1099.97	1108.65	-	-
MW-7	7/24/2008	36.62	-	1144.97	1109.97	1099.97	1108.35	-	-
MW-8	6/3/2003	73.63	-	1139.80	1084.80	1064.80	1066.17	-	-
MW-8	7/23/2003	73.28	-	1139.80	1084.80	1064.80	1066.52	-	-
MW-8	10/7/2003	72.59	-	1139.80	1084.80	1064.80	1067.21	-	-
MW-8	1/7/2004	72.11	-	1139.80	1084.80	1064.80	1067.69	-	-
MW-8	7/20/2004	70.21	-	1139.80	1084.80	1064.80	1069.59	-	-
MW-8	8/3/2006	71.74	-	1139.80	1084.80	1064.80	1068.06	-	-
MW-8	9/28/2006	71.43	-	1139.80	1084.80	1064.80	1068.37	-	-
MW-8	12/20/2006	72.48	-	1139.80	1084.80	1064.80	1067.32	-	-
MW-8	3/26/2007	72.62	-	1139.80	1084.80	1064.80	1067.18	-	-
MW-8	7/2/2007	71.56	-	1139.80	1084.80	1064.80	1068.24	-	-
MW-8	10/1/2007	69.91	-	1139.80	1084.80	1064.80	1069.89	-	-
MW-8	4/23/2008	68.53	-	1139.80	1084.80	1064.80	1071.27	-	-
MW-8	7/24/2008	68.53	-	1139.80	1084.80	1064.80	1071.27	-	-

Note : All elevations are referenced to mean sea level

TABLE 3

KWIK TRIP, INC.  
STATION NO. 768  
MINERAL POINT, WISCONSIN

FREE PRODUCT MEASUREMENTS & BAILING/PUMPING

(Data compiled on Commerce Database, & Downloaded)

Well Name: MW-1 Top of Well: 1145.22'					
Sample Date (mm/dd/yyyy)	Depth To Water (ft)	Depth To Product (ft)	Product Thickness (ft)	Product Removed (gallons)	Cumulative Removed (gallons)
7/24/2008	37.30	37.30	0.00	5	228
4/23/2008	36.78	36.78	0.00	5	223
10/1/2007	37.83	37.82	0.01	5	218
7/2/2007	41.65	41.62	0.03	5	213
3/26/2007	45.03	45.03	0.00	20	208
2/15/2007	44.34	44.33	0.01	24	188
1/15/2007	43.80	43.79	0.01	12	164
12/20/2006	43.85	43.84	0.01	20	152
11/15/2006	43.13	43.11	0.02	18	132
10/23/2006	42.57	42.55	0.02	24	114
9/28/2006	42.72	42.72	0.00	18	90
8/28/2006	42.77	42.77	0.00	18	72
8/3/2006	43.62	43.62	0.00	15	54
6/26/2006	42.33	42.33	0.00	15	39
5/30/2006	43.94	43.94	0.00	12	24
4/21/2006	45.60	45.60	0.00	12	12

Bid To Scope Well Purging/Pumping	
Approx. Well Volume (gallons)	Approx. Purge Total (gallons)
sampling only	
3.25	20
3.5	24
3.5	12
3.5	20
3.75	18
3.75	30
3.75	18
3.75	18
3.5	15
3.75	15
3.5	12
3.25	12

Well Name: MW-3 Top of Well: 1139.15'					
Sample Date (mm/dd/yyyy)	Depth To Water (ft)	Depth To Product (ft)	Product Thickness (ft)	Product Removed (gallons)	Cumulative Removed (gallons)
7/24/2008	41.15	40.91	0.24	1	50
4/23/2008	40.45	40.20	0.25	1	49
10/1/2007	41.76	41.35	0.41	1	48
7/2/2007	44.58	44.05	0.53	1	47
3/26/2007	47.32	47.31	0.01	3	46
2/15/2007	47.46	47.44	0.02	2	43
1/15/2007	46.96	46.92	0.04	3	41
12/20/2006	46.33	46.32	0.01	3	38
11/15/2006	45.37	45.34	0.03	3	35
10/23/2006	45.40	45.37	0.03	5	32
9/28/2006	45.26	45.24	0.02	3	27
8/28/2006	45.89	45.45	0.44	4	24
8/3/2006	47.10	45.28	1.82	5	20
6/26/2006	49.22	45.32	3.90	5	15
5/30/2006	48.10	45.40	2.70	5	10
4/21/2006	49.15	47.75	1.40	5	5

Bid To Scope Well Purging/Pumping	
Approx. Well Volume (gallons)	Approx. Purge Total (gallons)
sampling only	
0.5	3
0.5	2
0.5	3
0.5	3
0.75	3
0.75	5
0.75	3
0.75	4
1	5
1	5
0.5	5
0.5	5

Note: Top of Well (as noted on Commerce Website) is used to show top of casing

Note: Product Removed - represents a mixture of free phase petroleum product and petroleum contaminated water

Note: MW-1 - Purging was accomplished by pumping water column down to 65-65 feet bbls, allowing the water table to recover, then another pumping cycle, then recovery until 3 complete cycles were performed.

Note: MW-3 - Due to small well volume, and poor recovery, well was purged by bailing dry well, allowing to recover (partially - due to slow recovery) then another bailing cycle, then recovery until 3 complete cycles were performed.

Note: All wells were monitored after well purging/pumping events were completed. No noticeable drawdown effects were observed.

TABLE 3

KWIK TRIP, INC.  
STATION NO. 768  
MINERAL POINT, WISCONSIN

GROUNDWATER QUALITY DATABASE  
(all results are in micrograms per liter (µg/l))

Sample Location	Date Sampled	Benzene	Toluene	Ethylbenzene	Total Xylenes	tert-Butylmethyl ether	1,3,5 and 1,2,4-Trimethylbenzenes	GRO	Naphthalene
Enforcement Standard		5	1,000	700	10,000	60	480	-	40
Preventive Action Limit		0.5	200	140	1,000	12	96	-	8
MW-1	8/12/1998	20,000 <sup>1</sup>	3,400	900	1,400	1,400	700*	28,000**	< 550
MW-1	9/14/1999	14,000	6,400	2,200	8,100	840	4,030	57,000	820
MW-1	12/9/1999			Not Sampled - Free Product					
MW-1	3/10/2000	16,000	1,400	1,700	4,100	< 200	1,540	36,000	-
MW-1	6/22/2000			Not Sampled - Free Product					
MW-1	9/20/2000			Not Sampled - Free Product					
MW-1	12/19/2000			Not Sampled - Free Product					
MW-1	3/19/2001	18,000	4,600	1,800	4,900	740	2,230	40,000	-
MW-1	6/15/2001	19,000	7,500	2,200	5,600	< 210	2,260	46,000	-
MW-1	9/21/2001	16,000	8,300	2,200	5,650	2,000	2,430	49,000	-
MW-1	12/18/2001	16,000	8,300	2,000	5,370	620	1,840	46,000	-
MW-1	3/21/2002			Not Sampled - Free Product					
MW-1	6/4/2002	13,000	6,000	2,100	5,180	860	1,640	44,000	-
MW-1	9/4/2002	18,000	9,500	2,000	5,600	420	1,890	50,000	-
MW-1	11/27/2002	18,000	10,000	1,900	5,000	800	1,760	45,000	-
MW-1	3/18/2003			Not Sampled - Free Product					
MW-1	6/3/2003			Not Sampled - See MW-7 Results					
MW-1	10/7/2003			Not Sampled - See MW-7 Results					
MW-1	1/7/2004			Not Sampled - See MW-7 Results					
MW-1	8/3/2006	18,000	12,000	1,600	4,600	< 370	1,000	NA	< 270
MW-1	9/28/2006	16,000	12,000	1,600	4,800	< 370	1,890	NA	< 270
MW-1	12/20/2006	17,000	14,000	2,300	7,700	530	2,140	NA	1,200
MW-1	3/26/2007	16,000	11,000	2,900	7,700	470	3,330	NA	< 680
MW-1	7/2/2007	16,000	13,000	1,400	7,500	< 420	1,700	NA	1,500
MW-1	10/1/2007	14,000	14,000	2,400	7,800	140	2,330	NA	510
MW-1	4/23/2008	12,000	4,000	1,900	5,600	130	2,640	NA	550
MW-1	7/24/2008	10,000	12,000	2,600	8,100	< 46	2,330	NA	560
MW-2	9/14/1999	< 0.10	< 0.10	< 0.25	< 0.25	< 0.25	< 0.20	< 50	< 0.10
MW-2	12/9/1999	0.37	0.21	< 0.22	0.25	< 0.16	< 0.51	< 50	-
MW-2	3/10/2000	0.29	< 0.20	< 0.22	< 0.23	< 0.16	< 0.51	< 50	-
MW-2	6/22/2000	< 0.13	< 0.20	< 0.22	< 0.23	< 0.16	< 0.51	< 50	-
MW-2	9/20/2000	16	18	1.4	6.9	< 0.16	0.40	55	-
MW-2	12/19/2000	16	0.42	0.75	2.2	< 0.16	0.38	< 50	-
MW-2	3/19/2001	8.1	< 0.20	< 0.22	0.28	< 0.16	< 0.51	< 50	-
MW-2	6/15/2001	0.64	< 0.20	< 0.22	< 0.23	< 0.16	< 0.51	< 50	-
MW-2	9/21/2001	0.40	< 0.40	< 0.40	< 1.1	< 0.40	< 0.80	< 14	-
MW-2	12/18/2001	< 0.40	< 0.40	< 0.40	< 1.4	< 0.40	< 0.90	< 16	-
MW-2	3/21/2002	< 0.40	< 0.40	< 0.40	< 1.4	< 0.40	< 0.90	< 16	-
MW-2	6/4/2002	< 0.40	< 0.40	< 0.40	< 1.4	< 0.40	< 0.90	< 16	-
MW-2	9/4/2002	< 0.13	< 0.20	< 0.22	< 0.23	< 0.16	< 0.51	< 50	-
MW-2	11/27/2004	< 0.13	< 0.20	< 0.22	< 0.23	< 0.16	< 0.51	< 50	-
MW-2	3/18/2003	< 0.25	< 0.11	< 0.22	< 0.39	< 0.23	< 0.44	< 50	-
MW-2	6/3/2003	< 0.25	< 0.11	< 0.22	< 0.39	< 0.23	< 0.44	< 50	-
MW-2	10/7/2003	< 0.31	< 0.3	< 0.5	< 0.92	< 0.3	< 0.71	< 50	-
MW-2	1/7/2004	< 0.31	< 0.3	< 0.5	< 0.92	< 0.3	< 0.71	< 50	-
MW-2	8/3/2006	< 0.76	< 0.64	< 0.74	< 1.9	< 0.74	< 0.75	NA	< 0.54

Sample Location	Date Sampled	Benzene	Toluene	Ethylbenzene	Total Xylenes	tert-Butylmethyl ether	1,3,5 and 1,2,4-Trimethylbenzenes	GRO	Naphthalene
<b>Enforcement Standard</b>		<b>5</b>	<b>1,000</b>	<b>700</b>	<b>10,000</b>	<b>60</b>	<b>480</b>	<b>-</b>	<b>40</b>
<b>Preventive Action Limit</b>		<b>0.5</b>	<b>200</b>	<b>140</b>	<b>1,000</b>	<b>12</b>	<b>96</b>	<b>-</b>	<b>8</b>
MW-2	9/28/2006	<0.76	<0.64	<0.74	<1.9	<0.74	<0.75	NA	<0.54
MW-2	12/20/2006	<0.76	<0.64	<0.74	<1.9	<0.74	<0.75	NA	<0.54
MW-2	3/26/2007	<0.78	<0.84	<0.79	<1.5	<0.42	<0.80	NA	<0.68
MW-2	7/2/2007	<0.78	<0.84	<0.79	<1.5	<0.42	<0.80	NA	<0.68
MW-2	10/1/2007	<0.25	<0.11	<0.22	<0.39	<0.23	<0.25	NA	<0.50
MW-2	4/23/2008	<0.25	0.11	<0.22	<0.39	<0.23	<0.25	NA	<0.50
MW-2	7/24/2008	<0.25	<0.25	<0.22	<0.39	<0.23	<0.25	NA	<0.50
MW-3	9/14/1999	<u>1,400</u>	<u>1,000</u>	<u>1,800</u>	<u>4,400</u>	< 10	<u>3,080</u>	24,000	<u>500</u>
MW-3	12/9/1999	<u>2,000</u>	<u>1,300</u>	<u>1,700</u>	<u>4,300</u>	< 8.0	<u>2,570</u>	27,000	-
MW-3	3/10/2000	<u>1,600</u>	<u>1,100</u>	<u>1,500</u>	<u>3,800</u>	< 16	<u>1,920</u>	20,000	-
MW-3	6/22/2000	Not Sampled - Free Product							
MW-3	9/20/2000	Not Sampled - Free Product							
MW-3	12/19/2000	Not Sampled - Free Product							
MW-3	3/19/2001	Not Sampled - Free Product							
MW-3	6/15/2001	Not Sampled - Free Product							
MW-3	9/21/2001	Not Sampled - Free Product							
MW-3	12/18/2001	Not Sampled - Free Product							
MW-3	3/21/2002	Not Sampled - Free Product							
MW-3	6/4/2002	<u>2,200</u>	<u>1,900</u>	<u>2,000</u>	<u>5,490</u>	< 40	<u>4,900</u>	35,000	-
MW-3	9/4/2002	<u>1,700</u>	<u>2,200</u>	<u>1,700</u>	<u>4,900</u>	< 7.6	<u>4,800</u>	31,000	-
MW-3	11/27/2002	<u>3,600</u>	<u>4,500</u>	<u>5,000</u>	<u>14,000</u>	< 130	<u>30,000</u>	320,000	-
MW-3	3/18/2003	Not Sampled - Free Product							
MW-3	6/3/2003	Not Sampled - Free Product							
MW-3	10/7/2003	Not Sampled - Free Product							
MW-3	1/7/2004	Not Sampled - Free Product							
MW-3	8/3/2006	Not Sampled - Free Product							
MW-3	9/28/2006	<u>1,900</u>	<u>2,400</u>	<u>2,200</u>	<u>7,800</u>	< 370	<u>4,070</u>	NA	< 270
MW-3	12/20/2006	<u>2200</u>	<u>3500</u>	<u>2400</u>	<u>8200</u>	<150	<u>3200</u>	NA	<u>700</u>
MW-3	3/26/2007	<u>1600</u>	<u>2900</u>	<u>1900</u>	<u>6600</u>	< 84	<u>2600</u>	NA	<u>710</u>
MW-3	7/2/2007	<u>1600</u>	<u>1500</u>	<u>1600</u>	<u>7700</u>	<420	<u>2700</u>	NA	<u>1200</u>
MW-3	10/1/2007	<u>1100</u>	<u>2900</u>	<u>3400</u>	<u>13000</u>	<92	<u>37500</u>	NA	<u>8500</u>
MW-3	4/23/2008	<u>320</u>	<u>430</u>	<u>1700</u>	<u>5000</u>	<23	<u>4900</u>	NA	<u>790</u>
MW-3	7/24/2008	<u>210</u>	<u>250</u>	<u>2000</u>	<u>4700</u>	<12	<u>10100</u>	NA	<u>1100</u>
MW-4R	9/14/1999 <sup>2</sup>	-	-	-	-	-	-	-	-
MW-4R	12/9/1999 <sup>2</sup>	-	-	-	-	-	-	-	-
MW-4R	6/22/2000	< 0.13	< 0.20	0.31	< 0.23	< 0.16	< 0.51	< 50	-
MW-4R	9/20/2000 <sup>2</sup>	-	-	-	-	-	-	-	-
MW-4R	12/19/2000 <sup>2</sup>	-	-	-	-	-	-	-	-
MW-4R	3/19/2001 <sup>2</sup>	-	-	-	-	-	-	-	-
MW-4R	6/15/2001	< 0.13	< 0.20	< 0.22	< 0.23	< 0.16	< 0.51	< 50	-
MW-4R	9/21/2001	< 0.40	< 0.40	< 0.40	< 1.1	< 0.40	< 0.80	< 14	-
MW-4R	12/18/2001 <sup>4</sup>	-	-	-	-	-	-	-	-
MW-4R	3/21/2002 <sup>2</sup>	-	-	-	-	-	-	-	-
MW-4R	6/4/2002 <sup>2</sup>	-	-	-	-	-	-	-	-
MW-4R	9/4/2002 <sup>2</sup>	-	-	-	-	-	-	-	-
MW-4R	3/18/2003 <sup>2</sup>	-	-	-	-	-	-	-	-
MW-4R	6/03/2003 <sup>2</sup>	-	-	-	-	-	-	-	-
MW-4R	10/07/2003 <sup>4</sup>	-	-	-	-	-	-	-	-
MW-4R	1/7/2004 <sup>2</sup>	-	-	-	-	-	-	-	-
MW-4R	8/3/2006 <sup>2</sup>	-	-	-	-	-	-	-	-
MW-4R	9/28/2006 <sup>2</sup>	-	-	-	-	-	-	-	-
MW-4R	12/20/2006 <sup>2</sup>	-	-	-	-	-	-	-	-
MW-4R	3/26/2007 <sup>2</sup>	-	-	-	-	-	-	-	-
MW-4R	7/2/2007 <sup>2</sup>	-	-	-	-	-	-	-	-
MW-4R	10/1/2007	<0.25	0.17	<0.22	<0.39	<0.23	<0.25	NA	<0.50
MW-4R	4/23/2008	<0.25	0.22	<0.22	<0.39	<0.23	<0.25	NA	<0.50

Sample Location	Date Sampled	Benzene	Toluene	Ethylbenzene	Total Xylenes	tert-Butylmethyl ether	1,3,5 and 1,2,4-Trimethylbenzenes	GRO	Naphthalene
Enforcement Standard		5	1,000	700	10,000	60	480	-	40
Preventive Action Limit		0.5	200	140	1,000	12	96	-	8
MW-4R	7/24/2008	<0.25	<0.25	<0.22	<0.39	<0.23	<0.25	<50	<0.10
MW-5	9/14/1999	<0.10	<0.10	<0.25	<0.25	<0.25	<0.51	<50	-
MW-5	12/9/1999	1.7	<0.20	<0.22	<0.23	<0.16	<0.51	<50	-
MW-5	3/10/2000	2.6	<0.20	<0.22	0.34	<0.16	<0.51	<50	-
MW-5	6/22/2000	<0.13	<0.20	<0.22	<0.23	<0.16	<0.51	<50	-
MW-5	9/20/2000	3.4	<0.20	<0.22	0.59	<0.16	<0.51	<50	-
MW-5	12/19/2000	5.6	0.20	<0.22	<0.23	<0.16	<0.51	78	-
MW-5	3/19/2001	49	0.23	<0.22	<0.23	1.7	<0.51	<50	-
MW-5	6/15/2001	<0.13	<0.20	<0.22	<0.23	<0.16	<0.51	<50	-
MW-5	9/21/2001	<0.40	<0.40	<0.40	<1.1	<0.40	<0.80	<14	-
MW-5	12/18/2001	<0.40	<0.40	<0.40	<1.4	<0.40	<0.90	<16	-
MW-5	3/21/2002	58	<0.40	<0.40	<1.4	2.3	<0.90	100	-
MW-5	6/4/2002	8.6	<0.40	<0.40	<1.4	1.3	<0.90	<16	-
MW-5	9/4/2002	<0.13	<0.20	<0.22	<0.23	<0.16	<0.51	<50	-
MW-5	11/27/2002	3.1	<0.20	<0.22	<0.23	1.00	<0.51	<50	-
MW-5	3/18/2003	49	0.13	<0.22	<0.39	3.7	<0.43	<50	-
MW-5	6/3/2003	3	<0.11	<0.22	<0.39	2.8	<0.43	<50	-
MW-5	10/7/2003	<0.31	<0.3	<0.5	<0.92	0.94	<0.71	<50	-
MW-5	1/7/2004	<0.31	<0.3	<0.5	<0.92	<0.30	<0.71	<50	<0.54
MW-5	8/3/2006	<0.76	<0.64	<0.74	<1.9	<0.74	<0.75	NA	<0.54
MW-5	9/28/2006	<0.76	<0.64	<0.74	<1.9	<0.74	<0.75	NA	<0.54
MW-5	12/20/2006	<0.76	<0.64	<0.74	<1.9	<0.74	<0.75	NA	<0.54
MW-5	3/26/2007	<0.78	<0.84	<0.79	<1.5	<0.42	<0.80	NA	<0.68
MW-5	7/2/2007	<0.78	<0.84	<0.79	<1.5	<0.42	<0.80	NA	<0.68
MW-5	10/1/2007	<0.25	<0.11	<0.22	<0.39	<0.23	<0.25	NA	<0.50
MW-5	4/23/2008	<0.25	<0.11	<0.22	<0.39	<0.23	<0.25	NA	<0.50
MW-5	7/24/2008	<0.25	<0.25	<0.22	<0.39	<0.23	<0.25	NA	<0.50
MW-6	9/14/1999	<0.10	0.18	<0.25	<0.25	<0.25	<0.20	<50	<0.10
MW-6	12/9/1999	<0.13	<0.20	<0.22	<0.23	<0.16	<0.51	<50	-
MW-6	3/10/2000	0.19	0.37	<0.22	0.48	<0.16	<0.51	<50	-
MW-6	6/22/2000	<0.13	<0.20	<0.22	<0.23	<0.16	<0.51	<50	-
MW-6	9/20/2000	<0.13	<0.20	<0.22	<0.23	<0.16	<0.51	<50	-
MW-6	12/19/2000	<0.13	<0.20	<0.22	<0.23	<0.16	<0.51	<50	-
MW-6	3/19/2001	<0.13	<0.20	<0.22	<0.23	<0.16	<0.51	<50	-
MW-6	6/15/2001	<0.13	<0.20	<0.22	<0.23	<0.16	<0.51	<50	-
MW-6	9/21/2001	<0.40	<0.40	<0.40	<1.1	<0.40	<0.80	<14	-
MW-6	12/18/2001	<0.40	<0.40	<0.40	<1.4	<0.40	<0.90	<16	-
MW-6	3/21/2002	<0.40	<0.40	<0.40	<1.4	<0.40	<0.90	<16	-
MW-6	6/4/2002	<0.40	<0.40	<0.40	<1.4	<0.40	<0.90	<16	-
MW-6	9/4/2002	<0.13	<0.20	<0.22	<0.23	<0.16	<0.51	<50	-
MW-6	11/27/2002	<0.13	<0.20	<0.22	<0.23	<0.16	<0.51	<50	-
MW-6	3/18/2003	<0.13	<0.20	<0.22	<0.23	<0.16	<0.51	<50	-
MW-6	6/3/2003	<0.25	<0.11	<0.22	<0.39	<0.23	<0.43	<50	-
MW-6	10/7/2003	<0.31	<0.3	<0.5	<0.92	<0.3	<0.71	<50	-
MW-6	1/7/2004	<0.31	<0.3	<0.5	<0.92	<0.3	<0.71	<50	-
MW-6	8/3/2006	<0.76	<0.64	<0.74	<1.9	<0.74	<0.75	NA	<0.54
MW-6	9/28/2006	<0.76	<0.64	<0.74	<1.9	<0.74	<0.75	NA	<0.54
MW-6	12/20/2006	<0.76	<0.64	<0.74	<1.9	<0.74	<0.75	NA	<0.54
MW-6	3/26/2007	<0.78	<0.84	<0.79	<1.5	<0.42	<0.80	NA	<0.68
MW-6	7/2/2007	<0.78	<0.84	<0.79	<1.5	<0.42	<0.80	NA	<0.68
MW-6	10/1/2007	<0.25	0.14	<0.22	<0.39	<0.23	<0.25	NA	<0.50
MW-6	4/23/2008	<0.25	0.15	<0.22	<0.39	<0.23	<0.25	NA	<0.50
MW-6	7/24/2008	<0.25	<0.25	<0.22	<0.39	<0.23	<0.25	NA	<0.50
MW-7	6/3/2003	NS	NS	NS	NS	NS	NS	NS	-
MW-7	10/7/2003	NS	NS	NS	NS	NS	NS	NS	-

Sample Location	Date Sampled	Benzene	Toluene	Ethyl-benzene	Total Xylenes	tert-Butylmethyl ether	1,3,5 and 1,2,4-Trimethyl-benzenes	GRO	Naphthalene
<b>Enforcement Standard</b>		<b>5</b>	<b>1,000</b>	<b>700</b>	<b>10,000</b>	<b>60</b>	<b>480</b>	-	<b>40</b>
<b>Preventive Action Limit</b>		<b>0.5</b>	<b>200</b>	<b>140</b>	<b>1,000</b>	<b>12</b>	<b>96</b>	-	<b>8</b>
MW-7	1/7/2004	<u>3790</u>	155.00	324.00	1112.6	<6.0	735	11300	-
MW-7	8/3/2006	<u>1,500</u>	90	410	760	<74	<u>1,170</u>	NA	<54
MW-7	9/28/2006		Not Sampled - Poor recovery, sediment rich, poor sample						
MW-7	12/20/2006		Not Sampled - Poor recovery, sediment rich, poor sample						
MW-7	3/26/2007		Not Sampled - Poor recovery, sediment rich, poor sample						
MW-7	7/2/2007	<u>1800</u>	49	210	390	<21	720	NA	<34
MW-7	10/1/2007	<u>1000</u>	110	120	230	<2.3	340	NA	10
MW-7	4/23/2008	<u>4100</u>	840	410	780	<46	<u>680</u>	NA	30
MW-7	7/24/2008	<u>2800</u>	420	150	390	<12	<u>302</u>	NA	44
MW-8	6/3/2003	0.89	0.49	<0.50	<0.50	0.62	<0.50	78	-
MW-8	10/7/2003	2.06	4.33	1.31	1.37	5.76	0.593	412	-
MW-8	1/7/2004	1.37	4.95	1.46	5.78	<0.3	<0.71	424	-
MW-8 <sup>1</sup>	8/3/2006	<0.76	<0.64	<0.74	<1.9	<0.74	<0.75	NA	<0.54
MW-8 <sup>1</sup>	9/28/2006	<0.76	<0.64	<0.74	<1.9	<0.74	<0.75	NA	<0.54
MW-8 <sup>f</sup>	12/20/2006	<3.8	<3.2	<3.7	<9.3	<3.7	<3.7	NA	11
MW-8	3/26/2007	1.9	2.2	3.6	2.5	1.5	<1.6	NA	<1.4
MW-8	7/2/2007	<0.78	1.7	<0.79	2.1	<0.42	<0.80	NA	1.2
MW-8	10/1/2007	<1.4	0.72	<0.22	0.62	<0.23	1.83	NA	0.97
MW-8	4/23/2008	1.6	0.81	<0.22	1.1	<0.23	1.6	NA	0.97
MW-8	7/24/2008	1.8	0.58	0.39	<0.39	<0.23	0.92	NA	0.72

GRO : Gasoline Range Organics

- : Not analyzed

< : Less than the laboratory method detection limit (MDL)

\* : Reported concentration below the Quantitation Limit

\*\* : Sample contained lighter hydrocarbon fractions

<sup>1</sup> : Raised Quantitation Limit due to dilution for background interference Results reported from higher dilution

<sup>2</sup> : Well was dry

0.45 : Concentration exceeds NR140 Preventative action limits (Bold)

45 : Concentration exceeds NR140 Enforcement Standards (Underlined)

MW-8<sup>1</sup> : Sample was diluted due to foaming agent (likely related to small volume of water within the well, water was sediment rich(LS rock frags/TSS), which reacts, effervesces with the HCL acid preservative, thus causes foam within sample bottle)



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**CASE SUMMARY: SITE CLOSURE/GIS REGISTRY PACKAGE**  
**Remedial Investigation and Free Product Removal**  
**Kwik Trip Store # 768, 537 Ridge Street, Mineral Point WI**  
**(BRRTS # 03-25-113363 & PECFA # 53565-1440-35-A)**

**BACKGROUND**

The site is located in the SW¼ of the SW¼ of Section 31, Township 5 North, Range 3 East on the Mineral Point, Wisconsin Quadrangle 7½-minute topographic map (Figure 1). The street address for the site is 535 Ridge Street, Mineral Point, Wisconsin 53565. The site was reportedly a historical gasoline retail business that Kwik Trip acquired in 1988. A site map is included as Figure 2.

**REMEDIAL INVESTIGATION**

*1997-2003 – Conducted by Leggette, Brashears & Graham*  
*2003-2005 – Conducted by Pioneer Environmental Inc.*

**Soil Evaluation**

A pre-UST system upgrade soil profiling investigation, October 1996, consisting of one Geoprobe Boring, identified petroleum contaminated soil in the vicinity of the pump islands. The UST dispenser system and piping were upgraded in April 1997, where petroleum contaminated soil was identified, and approximately 60 tons of contaminated soils were removed and hauled to Mallard Ridge Landfill. Based on prior reports and tables, it appears that the soil that exceeded NR746 T1 and T2 tables were excavated and removed to a depth of 4 feet, where the excavation was restricted by weathered bedrock. Based on sample results the remaining petroleum contaminated soil was below NR720 RCLS except for the lead parameter, in several locations. The Remedial Investigation Report (LBG - March 2001) indicated that due to the relatively isolated area of petroleum contaminated soil and the presence of near surface bedrock, the remainder of the borings beyond MW-1, did not include any soil sampling.

**Groundwater Evaluation**

The initial groundwater remedial investigation (1999) consisted of the advancement of six soil borings/rock drilling and installation of six monitoring wells to aid in delineating the extent of the petroleum contaminated ground water plume. A subsequent additional groundwater investigation (2003) consisting of two rock cores and two additional monitoring wells were installed.

The 2003 rock core data provided a better understanding of the competency and relative fractured density in the underlying bedrock. Basically there was 5 feet of overburden, followed by weathered limestone layer to a depth of 11-13 ft bls. Then a highly fractured limestone unit

was encountered from approximately 25 to 45 feet bls. Beneath this unit a more competent, tan colored, limestone was encountered from 45 to 57/70 feet bls. At the depth of 57 feet in RC-1 (North side of site) and 70 feet in RC2 (Southeast – down gradient of site), a more dense, less fractured, grey dolomite was encountered to the termination depth of the rock cores (85 and 95 feet bls, respectfully).

The historic groundwater elevation measurements indicating a groundwater flow direction that is predominately southeast; however flow has fluctuated from the east to south over the sampling periods. The depth to the water table on site fluctuates around 40 feet bls, while down gradient (off site) the water table appears lower in the bedrock at depths of 50-70 feet bls. The average hydraulic gradient changes from relatively steep (0.132 ft/ft) in the southern portion of the site, to relatively flat (0.011 ft/ft) in the northern portion of the site.

The historic presence of petroleum free product in MW-1 and MW-3 has been observed periodically since 1999. The dissolved petroleum contaminant plume has been monitored for nearly 20 sampling rounds in most of the wells, and has indicated the dissolved petroleum hydrocarbon plume is limited to the area near and down-gradient of the former/existing UST system.

**ADDITIONAL REMEDIAL INVESTIGATION & FREE PRODUCT REMOVAL**  
**( BID TO SCOPE PECFA PROJECT PHASE)**

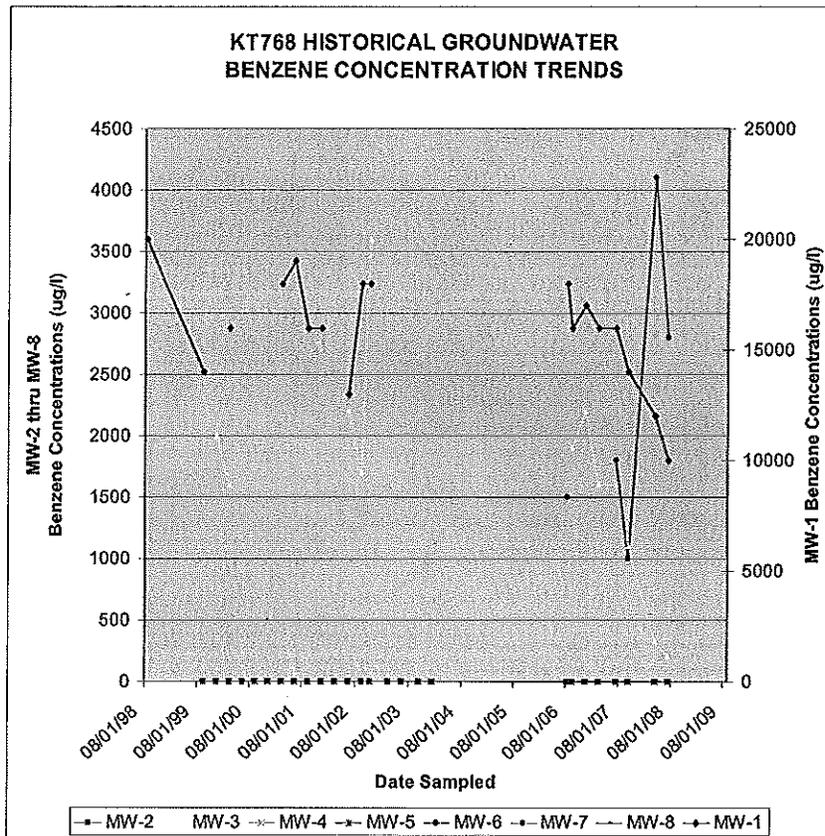
*– April 2006-December 2008 - Conducted by Pioneer Environmental Inc. :*

Free Product / Groundwater Pumping

This Bid to Scope Project was initiated in April 2006, when 12 months of monthly free product bailing and contaminated groundwater pumping was commenced on MW-1 & MW-3. Hydrophobic filter socks were used within the wells between monthly pumping events. During these events and subsequent quarterly sampling, relatively minor free product sheen to 0.01-0.02 feet of free product was observed in MW-1, located on the Kwik Trip Property. MW-3, located in Fair Street, had free product ranging from about 4 feet in June of 2006 to 0.01 feet in March 2007 (end of monthly pumping). During the quarterly sampling with no hydrophobic filter socks present, free product had a slight presence in MW-3 from a couple hundredths to 0.25 feet, free product is usually bailed down to a sheen with 1-3 gallons of product water mixture being removed.

Groundwater Monitoring

The 8 rounds of sampling have shown that 4 of the 8 monitoring wells had basically no elevated concentrations (MW-2, MW-4, MW-5 & MW-6). Based on benzene concentrations, MW-1 & MW-3 have had decreasing concentrations over time, while MW-8 had stable concentrations and MW-7 had slightly increasing concentration trends. MW-4 & MW-7 have been historically dry or with very little well volume, thus have only been sampled when water volume was sufficient, Thus the trends observed in MW-7 have been inconsistent, however, this well is screened just above and right next to MW-1 therefore the trend of groundwater concentrations in MW-7 is likely more reflective of MW-1 concentrations trends (see graph). Benzene concentrations as well as other PVOC concentrations are above NR140 ESs in MW-1, MW-3 and MW-7. The highest benzene concentration was in MW-1, 10,000 ug/l in July 2008, which is a 50% decrease since the peak concentration of 20,000 ug/l in 1998. Plume dimensions and flow directions appear to have remained relatively the same



### RECOMMENDATION/CONCLUSION

Free product in fractured bedrock is difficult to remediate, especially at the depths encountered at this site (40-50 feet bls). Based on monitoring results, the free phase petroleum hydrocarbons have decreased over time. In addition, the dissolve petroleum concentrations although relatively high, have also decreased overtime. The final closure alternative for this site will be natural attenuation with a GIS listed NR140 ES exceedence. Considering that there has been over 10 years of monitoring, with 27 sampling rounds having been collected. If Additional groundwater sampling is required, that will likely also continue to show decreasing PVOC concentrations; however, the hindrance to regulatory site closure is the free product and relatively high petroleum concentrations being located within the bedrock. The difficulty to remediate the fractured bedrock media and the depth of the contamination make further active bailing/treatment rather futile. The best active alternative would require a pumping/drawdown type system, which in bedrock would be rather expense and cost prohibited. Thus, Pioneer Environmental Inc believes the current monitoring data is sufficient at this time to approach a regulatory site closure with a GIS soil and groundwater listing.

TABLE 1A

KWIK TRIP, INC.  
STATION NO. 768  
MINERAL POINT, WISCONSIN

SOIL QUALITY SUMMARY - REMAINING/CONFIRMATION SOIL SAMPLES  
(all results in milligrams per kilogram (mg/kg))

Location	Sample Depth (ft bg)	Date	MTBE	Benzene	Toluene	Ethyl-benzene	Total Xylenes	1,3,5-Trimethylbenzene	1,2,4-Trimethylbenzene	GRO	Total Lead	*Soil Removed
NR720 - RCLs			-	0.0055	1.5	2.9	4.1	-	-	100	50	
NR746 - T1	All			8.5	38.0	4.6	42.0	83.0	11.0	-	-	
NR746 - T2	0-4			1.1	-	-	-	-	-	-	-	
1	2	4/23/1997	< 0.026	< 0.011	< 0.026	< 0.026	< 0.077	< 0.026	< 0.026	< 5.2	< 4.1	N
2	2	4/23/1997	< 0.026	< 0.011	< 0.026	< 0.026	< 0.080	< 0.026	< 0.026	< 5.3	< 4.2	N
7	2	4/23/1997	< 0.030	< 0.012	< 0.030	< 0.030	< 0.090	< 0.030	< 0.030	< 6.0	78	N
8	2	4/23/1997	< 0.030	< 0.012	< 0.030	< 0.030	< 0.091	< 0.030	< 0.030	< 6.1	52	N
12	2	4/23/1997	< 0.026	< 0.01	0.089	0.076	0.604	0.233	0.551	10	26	N
13	2	4/23/1997	< 0.026	< 0.01	0.168	0.116	1.05	0.379	0.896	18	8.0	N
MW-1	2-4	8/11/1998	< 0.026	< 0.026	< 0.026	0.028	0.056**	0.18	0.20	21	35.5	-
MW-1	9	8/11/1998	< 0.025	< 0.025	< 0.025	< 0.025	< 0.050	< 0.025	< 0.025	< 1.3	8.43	-
Field Blank	-	4/23/1997	< 0.025	< 0.01	< 0.025	< 0.025	< 0.075	< 0.025	< 0.025	< 5.0	-	-

25.30 : Concentration exceeds NR 720 Residual Contaminant Level (BOLD)

25.30 : Concentration exceeds NR 746 - Table 1 Values (UNDERLINED)

25.30 : Concentration exceeds NR 746 - Table 2 Values (ITALICS)

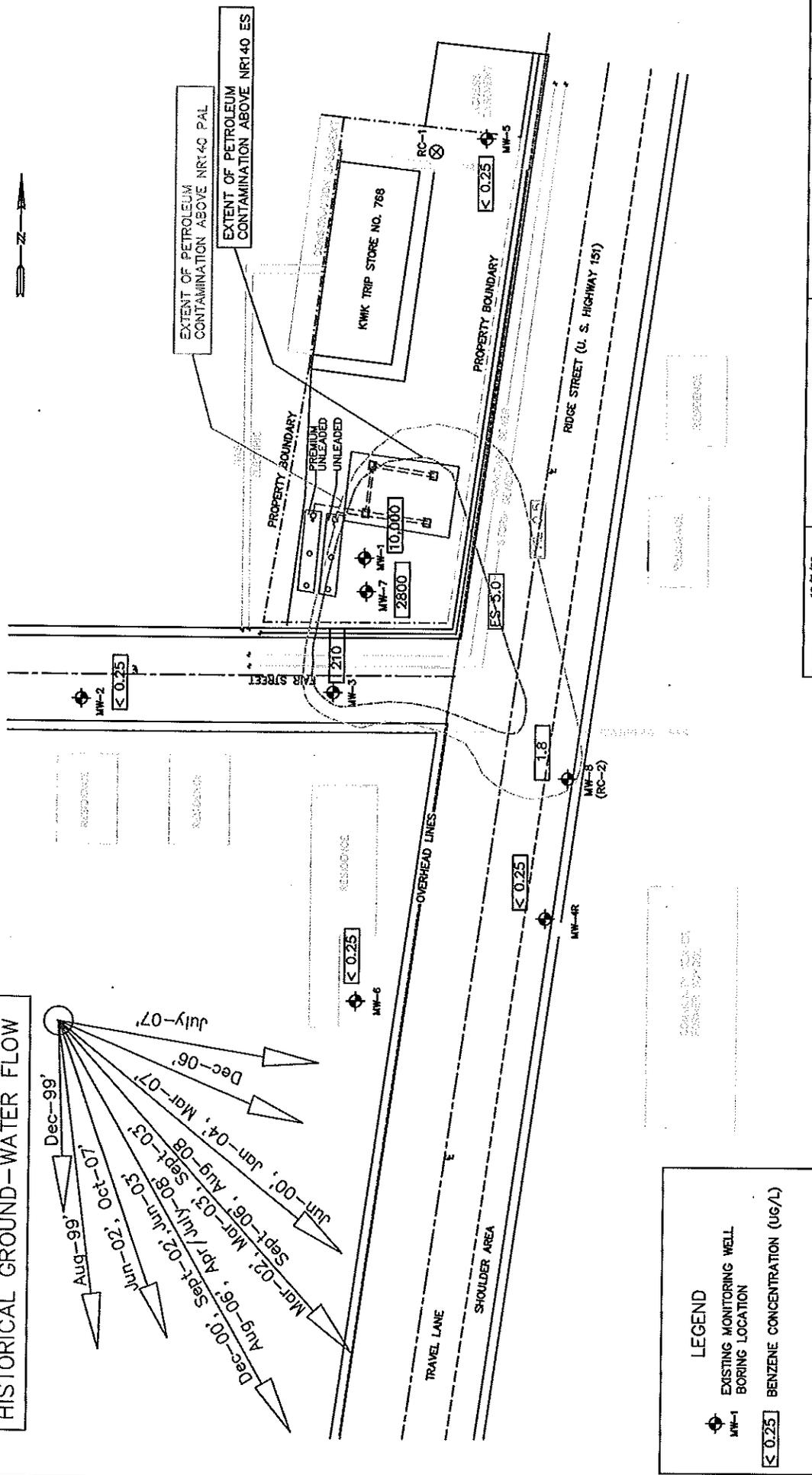
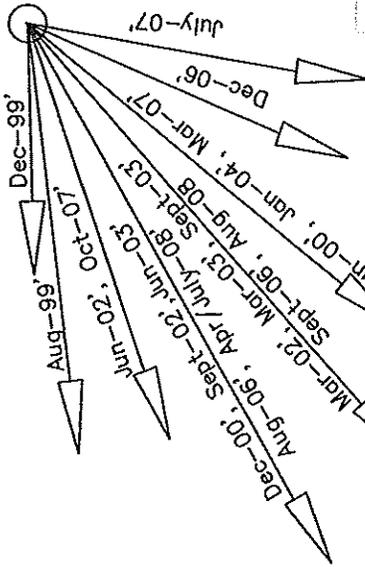
\* : Soil sample excavated and hauled to landfill

RCLs : Residual Contaminant Levels established in NR 720.09 and 720.11, Wisc. Admin. Code

ft bg : Feet below grade

< : Not present above laboratory method detection limit (MDL)

HISTORICAL GROUND-WATER FLOW



**LEGEND**

- MW-1 EXISTING MONITORING WELL
- BORING LOCATION
- BENZENE CONCENTRATION (UG/L)

\*ALL BUILDING LOCATIONS ARE APPROXIMATE



DATE:	12/3/06
REVISION:	1
DISK:	PROJCTS/AT/768
FILE:	gww-flow
DRAWN:	CHECKED:

KWIK TRIP, INC.  
STATION NO. 768  
MINERAL POINT, WISCONSIN  
GROUNDWATER BENZENE  
CONTAMINATION MAP  
JULY 24, 2008

PIONEER ENVIRONMENTAL INC  
MOUNT HOREB, WI

FIGURE

1